

POPULATION TODAY

Vol. 18, No. 10 October 1990

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Mexico's census count seems low. (See page 4.)

FROM THE EDITOR'S DESK

Census dispatches from around the world have filled *Population Today* in recent months. In the very issue of *PT* you're holding are reports from the census fronts in the United States, Viet Nam, and Mexico.

Years that end in zero always portend a bumper harvest of censuses. Sixty-three headcounts are scheduled to be completed during 1990, including those for the United States and China. Forty-three more are due in 1991. By the end of 1991, nine of the world's 10 most populous countries, containing 57 percent of the world's population, will have conducted enumerations within a two-year time span. The 10th, the USSR, held its latest census in January 1989.

Conducting a census usually takes mere days (not counting the years of preparation). Compiling and releasing the data takes months or even years. But ultimately, the tallies become part

of general knowledge, most conspicuously in the UN's *Demographic Yearbook* (see page 11) as well as other data compilations, including PRB's *World Population Data Sheet*.

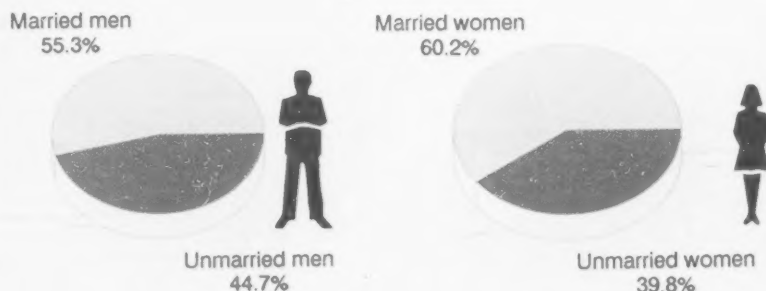
Some population censuses are conducted every five years (as in Canada, Japan, South Korea, and Sweden). In a very few countries (such as Iceland), censuses have been supplanted by universal registers. But most countries conduct full headcounts every 10 years or so; in fact, in the last decade some 189 countries have conducted a census.

The countries know that censuses are essential to capture demographic data for small geographic areas, calibrate population benchmarks, hone the accuracy of past and future projections and estimates—and ultimately, after adding all the figures, ascertain where world trends are headed.

—Art Haupt

SPEAKING GRAPHICALLY

U.S. Singles Capital: New York City



New York, besides being the nation's most populous city, is also the city with the largest number of unmarried males and females age 25-34 years, based on 1980 Census data (the latest data available). Of the city's 717,130 men in this age group, 44.7 percent, or 320,405, are unmarried; of the 792,361 women in the same age group, 39.8 percent, or 315,144, are unmarried.

—A. deS.

Source: U.S. Bureau of the Census, 1980 Census of Population, PC80-1-D34, Table 205.

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Recycled Paper

Preliminary Totals Cause Census Stir

The 1990 Census has been many things: the most automated, the most elaborate, and surely one of the most controversial. But there is one thing it isn't—over.

Not even now. Not even after the release, in late August, of preliminary counts—closely followed by a momentary media maelstrom, for many of the figures for states, cities, and other jurisdictions are were lower than expected. (See *Take a Number*, page 10, for the Census Bureau's preliminary 1990 state numbers compared to PRB's projections based on pre-censal estimates.)

"Census Estimates for Mass. Defy '88 Forecasts," headlined the *Boston Globe*. "Census Numbers Disputed," said the *Philadelphia Inquirer*, and *USA Today* complained "Census Count Isn't Up to Projections." Politicians, never the masters of understatement, immediately jumped into the fray. Rep. Tom Sawyer (D-Ohio) worried aloud that the national count would end up 5 million short. Mayor David Dinkins of New York called the count of his city "unadulterated nonsense."

Not exactly what the Census Bureau needed following last spring's flap over an initially lower-than-hoped-for rate of return of census forms.

To be sure, the 245.8 million preliminary total is less than expected. But preliminary numbers, as the name implies, are not final counts. Those final numbers will not be ready until December 31, 1990, for states and later still for smaller areas. The preliminary counts are, rather, data sent to the states for local review, a procedure that is an integral part of the census process itself.

During local review, jurisdictions such as cities and counties have a chance to look over the figures for errors such as omitted blocks, apartment houses, neighborhoods, and so forth. In this way, local officials who are most likely to discover omissions assist the Bureau in its goal of the most complete coverage possible.

It is impossible to estimate exactly how many more people will or won't be added to the preliminary census



April's headcount was only the beginning.

counts before they become final. But William O'Hare, PRB's director of policy studies, has identified seven factors that are likely to increase the final national total by 1 million or more:

1. Computerized imputation has not yet been performed. This procedure accounts for housing units where it is unclear whether or not there are occupants, or how many there are. In 1980, imputation resulted in the addition of about 760,000 people to census figures.
2. The preliminary data reflect only information collected through early August 1990. People who have been identified since that point will be included in the final figures.
3. Local-review challenges will result in some changes. Local jurisdictions have 15 working days to challenge census figures and provide evidence of missed housing units. Numerous challenges are expected. In all but three states, the preliminary figures are lower than expected as compared to recent estimates. In most major cities the figures are also lower than expected.
4. The Census Bureau's "Were You Counted?" campaign is slated to continue into late September or early October. This campaign, which aims to encourage people not already enumerated to come forward, is likely to count some additional people.

5. An internal Census Bureau count review may result in some changes. Regardless of challenges made during the local review process, the Bureau itself conducts extensive reviews of its figures and sends out enumerators to check areas where people may have been missed.

6. The count of people living in "split blocks" (blocks that are split between two political jurisdictions) have not yet been included in either

jurisdiction's figures—that will come later—although they have been included in tallies organized by higher levels of geography.

7. Data from military personnel on ships at sea have not been fully processed. These people will be included in the count of their home ports.

Furthermore, military overseas and their dependents are not part of preliminary numbers. This separate group of about 1 million will be added to the final figures, but only for purposes of reapportionment.

In short, the figures may change nationally, and/or at the state level, and/or locally. And as they change, so may the distribution of seats in the House of Representatives.

This distribution is not yet cast in stone. Based on the preliminary counts, Wisconsin appears to have held on to its ninth seat, one that prior to the census seemed to be in jeopardy. But several other states are still in suspense. If, say, New York succeeds in adding more people to its preliminary count, those states on the verge of gaining or losing a seat could be tipped over the edge. And this could come as a nasty shock (or pleasant surprise) to those who thought the dramatic reallocations of seats they saw in their late-summer newspapers were final.

—C.H.

First Clues to the Mexican Census Mystery

Early reports of Mexico's 1990 Census give a population count for the nation that is unexpectedly low.

The population figure released by INEGI (National Institute of Statistics, Geography, and Information), is 81,140,923, as of Census Day, March 12, 1990. This preliminary national total is several million people short of precensal projections.

Most estimates for Mexico in 1990 (including PRB's *World Population Data Sheet*) had pegged Mexico as having over 88 million people. If the present figure were to prevail, Mexico, although still the world's 11th most populous country, would have less than a 2-million person lead over the new, unified Germany.

It must be emphasized that these figures are preliminary, and that by the very nature of the census tabulation process, such figures will differ somewhat from final ones. The previous Mexican census count—in 1980—was also considered somewhat low, and retroactive statistical adjustments were made. Nonetheless, for a census to be 8 or 9 percent lower than expected, in a country that is considered to have an acceptable statistical infrastructure, is cause for some head-scratching in the demographic community.

In addition, the figures released for Mexico City show the total metro area as having 15 million people—a figure that is 5 million smaller than generally expected and only half a million higher than that of 1980.

In the absence of final, definitive numbers, or detailed data for small geographic areas, demographers are cautious about commenting on these numbers. But the potential factors behind such a low count make an absorbing (and so far unsolved) missing-persons detective story.

The 1980 Census was troubled by underenumeration. Its original official total was 66.8 million, but with statistical hindsight the UN Population Division, in its latest assessment, now pegs the 1980 population at 70.4 million. In any event, the 1980 benchmark is not confidence-inspiring.

The 1990 Census operation is reported to have been much more suc-

cessful. But one change in census procedure in 1990 may have affected the figures: Mexico's censuses are conducted by door-to-door enumerators. Previously, each census was conducted on a single Sunday, but in 1990 for the first time the enumeration was stretched over five days. Households where an adult respondent was not available were left an instruction card asking respondents to go to the enumerator's address and be debriefed. Not all respondents may have complied.

Other possible causes may include:

Lower fertility. Mexico's fertility may be lower than expected, due to, among other factors, higher than expected contraceptive prevalence.

Some 45 percent of Mexican women of reproductive age in union were using contraception as of 1987. It can be argued that Mexico's contraception figures plausibly should be closer to Brazil's and Colombia's. These two countries, which have social and economic similarities to Mexico, showed mid-1980s contraceptive prevalence rates that were much greater—in the 60-percent range.

Higher mortality. Higher than expected mortality might account for the lower population, if the age structure turns out to be older, or if statistics show a less rapid decline in the infant mortality rate or higher age-specific mortality rates than expected, or the effects of disease.

Emigration. The significant number of Mexico's residents who have migrated to the United States or other countries during the decade may conceivably account for some of the shortfall. Some 81.3 percent of undocumented aliens applying for amnesty under the 1986 Immigration Reform and Control Act were from Mexico. Whether they are the tip of an emigration iceberg is another question.

No date has been set for the release of final, more detailed census results. But when they appear, they will include age-specific data, and any anomalies in age-structure could be the key to the mystery.

Fewer people in the working ages would suggest emigration as the reason for any lower-than-expected na-

tional total. Fewer children than projected in the earliest ages would suggest lower fertility. Fewer-than-projected children in general might suggest underreporting by respondents.

Mexico experiences an estimated 2.7 million births per year and 0.5 million deaths, for a natural increase of 2.2 million, or nearly 200,000 per month. The total fertility rate (TFR) is an average of 3.8 total lifetime children per woman. The family planning campaign that began in earnest in the 1970s, when the TFR was 6.2, has been successful in reaching the grassroots level.

The United States, a country with about three times Mexico's population, experiences about 4 million births per year and 2.2 million deaths. The disparity in deaths between the two countries (2.2 million versus 0.5 million) is principally due to the United States's older age structure.

—A.H.

An Invitation to PRB's Awards Dinner

The Board of Trustees and the staff of the Population Reference Bureau, Inc., cordially invite you to celebrate PRB's 61st anniversary at the 1990 Annual Awards Dinner recognizing outstanding contributions in the field of demography.

The dinner speaker will be W. Parker Mauldin, Program Associate, the Rockefeller Foundation.

Date: Thursday, November 1, 1990

Time: Cocktails (cash bar)
6:30 pm
Dinner and Awards
Ceremony 7:15 pm

Place: National Press Club
Washington, D.C.

Awards Dinner tickets are \$40 each. Send check to Population Reference Bureau, Attn.: Colette Thomas, 777 14th St., N.W., Suite 800, Washington, D.C. 20005. Checks payable to PRB.

SURVEY REPORT

Haiti

Haiti, with a population of 6.5 million, has the lowest contraceptive prevalence rate of any Caribbean country. The 1977 Fertility Survey in Haiti found that 14 percent of women in union were using some method of contraception and 5 percent were using a modern method. Surprisingly, later surveys reported that use had declined from even these minimal levels. The Contraceptive Prevalence Survey of 1983 recorded a rate of 7 percent overall and 4 percent for modern methods. The 1987 Morbidity, Mortality, and Utilization of Health Services Survey found similarly low levels.

Although these surveys provided a great deal of information about family planning and fertility in Haiti, they also raised several questions. Consequently, in 1989 the Haiti National Contraceptive Prevalence Survey (NCPS) was conducted. The Child Health Institute, with funding from USAID and IPPF, and technical support from the Division of Reproductive Health of the Centers for Disease Control, administered the survey.

In addition to gathering data to document trends in fertility and health, the survey had specific goals. By including male respondents, the survey endeavored to:

- explain the discrepancy between the number of contraceptives (especially condoms) reportedly distributed and the number used.
- obtain data on fertility, contraceptive use and sources of supply, method mix, and unplanned pregnancies.
- investigate barriers to use of contraception.
- examine male roles in family planning.

The Preliminary Report of the 1989 survey found that use of family planning in Haiti among women in union has risen to 10 percent; use of traditional methods



More Haitian women now use contraceptives.

is less than 1 percent. The most commonly used method is the pill (4 percent of all women in union), followed by female sterilization (2.5 percent) and the injection (1.6 percent). Less than 1 percent of women in union report the use of condoms.

Among men in union, the proportion using family planning is 11 percent, with condoms being the most widely used method (3.4 percent of men in union). The report speculates that women may underreport condom use because they consider it a male method or because they use it as a back-up method for another "female" method which they do report. Men in union may also be reporting use of condoms with partners outside of their current union. Among all men, use of family planning is 8.5 percent, with 6 percent of single men, mostly in the urban areas, reporting condom use.

The 1989 NCPS asked condom-users their reasons for using the method. The majority of men in union (62 percent) say they use condoms to prevent pregnancy, but 13 percent use the method for protection against sexually transmitted disease, including AIDS, and another 20 percent give both reasons. Among single male users, disease prevention is the primary reason given for using condoms (34 percent). About three-quarters of male condom-users report that they

use the method every time they have sexual intercourse. Although these figures indicate that some men are making an effort to protect themselves and their partners from pregnancy and/or diseases, in a country where HIV infection is high, the many nonusers of barrier methods remain at risk.

Among men and women in union not currently using family planning, about two-thirds give reasons related to pregnancy, infertility, or sexual activity. Thirty-seven percent of all the nonusing women are breastfeeding or pregnant, and another 10 percent would like to become pregnant. Another 18 percent are not sexually active or believe they are menopausal.

Almost twice as great a proportion of men as women say they desire a pregnancy (18 percent), while 16 percent of men believe their partner is menopausal (this could be true as men 15-59 and women 15-49 years were interviewed; the men could have older partners). Nine percent of women in union say they do not know of any method, while 7 percent of men in union gave this reason for nonuse.

Among women who gave birth in the five years before the survey, more than two-thirds received at least one prenatal care visit; 22 percent had more than six visits. Of these recent births, mothers reported that three in 10 were not planned.

Answers to many other questions posed by the survey await publication of the final survey report. It is evident, however, that information gathered by interviewing men as well as women allows for comparisons that can help illuminate possible barriers to use of family planning.

—B.C.S.

DEMOGRAPHER'S PAGE

First Results Of Viet Nam's 1989 Census

by Terence H. Hull

Reunited Viet Nam carried out a census in 1979, but the results were not distributed widely. The tabulated materials¹ that were published did not include some information considered standard on a modern census, such as marriage and fertility data, residence-related information, and patterns of recent migration. As a result, the 1979 enumeration was used relatively little for demographic analysis.

To correct these difficulties the Government of Viet Nam, with assistance from the UN Population Fund, ESCAP (Economic and Social Commission for Asia and the Pacific), and the Australian Bureau of Statistics, designed the 1989 Census to give a full and accurate picture of demographic trends in the nation.

The enumeration was conducted in three sections. First, a full enumeration was undertaken of all civilians considered to be usually resident in the country as of midnight March 31-April 1, 1989. A six-month cutoff was used to define the concept of "usual" residence. The types of questions asked in the full enumeration included:

1. Name
2. Relationship to head of household
3. Sex
4. Date of birth
5. Ethnic group
6. Internal migration
7. Literacy
8. Education
9. Qualifications
10. Marital status
11. Usual activity
12. Occupation
13. Industry

The second section was a sample census of 5 percent of the total civilian

population, using the same questions as the full enumeration, but with questions for women of childbearing age:

14. Children ever born
15. Children still living
16. Date of last birth
17. Deaths in the household since the Tet holiday 1988

These questions are used to estimate levels of fertility and mortality. Additionally, some questions on housing were asked to people in the 5-percent sample. This sample enumeration covered approximately 3 million people out of the total civilian population of 63.4 million.

The third part of the census was the collection of data on all members of the so-called Special Enumeration Group, which included members of the

military, diplomatic corps, and workers sent overseas. This group was asked the same questions as the full enumeration. Just over 1 million people were in the Special Enumeration Group, making the overall total population of Viet Nam 64.4 million.

Preliminary Results

The first census results were published in March 1990, in a report of 74 pages, with appendices containing 15 tables and Vietnamese and English versions of the questionnaire. Titled "Sample Results," the report covers the full questionnaire results from the 5-percent sample households, and, for the national tables, the returns from the Special Enumeration Group.² The authors warn that the sample results are still subject to some adjustment to ensure that returns from each province contribute the correct weight to the national results—that is, the General Statistical Office needs to check the results against the original sample frame to ensure the findings are representative. Nonetheless, the tables are unlikely to be adjusted significantly, and for most variables the final reports will be based on the full enumeration currently being processed.

The tables in the preliminary report provide sufficient data to make indirect estimates of fertility and mortality levels, and analysis of the first available national data on marriage patterns in Viet Nam. The remainder of this article will review these findings.

Trends in Fertility Decline

Indirect estimates of total fertility rates (TFR) derived from the 1979 and 1989 Censuses are presented in Table 1. They are called indirect because they are not based on registration statistics or even directly on questions about the number and timing of births, but rather are calculated from reports of the ratio of children to women of childbearing age, or the date of women's last birth. The trends implied by these

Table 1. Viet Nam's Estimated Total Fertility Rates, 1970s to 1989

Reference period for estimate	TFR	Estimation method
Results from 1979 Population Census		
Total 1970-1974	6.03	Rele
Total 1975-1979	4.85	Rele
Results from 1989 Population Census		
Total 1980-1984	4.69	Rele
Urban	3.42	Rele
Rural	5.13	Rele
Total 1985-1989	4.22	Rele
Urban	2.80	Rele
Rural	4.63	Rele
Total 1988-1989	3.93	P/F
Urban	2.51	P/F
Rural	4.39	P/F

Notes. TFR = total fertility rate: the average number of lifetime children per woman based on current age-specific fertility rates. Calculations made using the Easwespop Fertility Estimate Program of the East-West Population Institute.

Rele = Rele Child to Woman Ratio Method, calculated from the age-sex structures reported in the 1979 and 1989 Census reports.

P/F = Parity/Fertility Pattern Method calculated from data on children ever born, and children born in the last year reported in the 1989 Census report.

Table 2. Trends in the Marital Status Indexes^a of Women in Indonesia, 1971-1985, and Viet Nam, 1988-1989

Indonesia Marital status	Year of estimate			
	1971	1980	1985	1987
Singulate mean age at marriage	19.28	20.03	21.1	-
Single	.157	.205	.241	.259
Currently married	.739	.723	.701	.694
Widowed	.058	.062	.021	.018
Divorced	.046	.046	.038	.030

Viet Nam Marital status	Year of estimate	
	1988	1989
Singulate mean age at marriage	-	23.22
Single	.342	.334
Currently married	.634	.628
Widowed	.015	.020
Divorced	.009	.010
Separated	.021	.009

^aWeighted according to the Hutterite "Natural Fertility Pattern," thus giving greatest emphasis to the experience of women in the peak fecundity ages 20-39.

calculations are reasonable, with an apparent even decline in fertility from 6 to 4 lifetime children per woman on average from the early 1970s to the time of the 1989 Census. This is also the period of rapid development of Viet Nam's family planning program.

Confirmation for this result can be found in the analysis of the 1988 Demographic Survey of Viet Nam, reported by Nhan and Hanenberg.³ According to this nationally representative survey, the TFR for the nation fell from 4.6 average children per woman in 1977 to 3.7 in 1987. Because of the methodology used in that survey, the authors caution against putting too much faith in the fertility estimates for single years, but contend that the "total fertility rate was at least 4.1 in 1985-1987," which is quite in line with the census estimate of 4.2 for 1985-1989.

The sample results do not provide any provincial level data that can be used to calculate regional variations of fertility, but Figure 1 shows the TFR levels of each province. Here it can be seen that the areas with the lowest fer-

tility are the densely populated delta regions around Hanoi and Ho Chi Minh City. In the rest of the country, fertility is at least 20 percent higher than the national average. When final census results are available, it will be possible to calculate fertility levels in a variety of ways for each province and thus obtain a better picture of the national impact of social changes and the family planning program.

For many years, analysis of demographic and social trends in Viet Nam have been hampered by lack of information on marriage patterns. This information is useful not only in monitoring factors responsible for fertility levels, but also reflects changes in the roles of women and trends in household formation and dissolution. The 1989 Census marital status data will be a very useful addition to the analytical resources of economists and sociologists.

Marital Status

Comparison of marriage patterns of Viet Nam with those of Indonesia reveals a somewhat higher singulate mean age at marriage (SMAM) and relatively lower rates of divorce and widowhood in Viet Nam than in its more populous Asian neighbor (see Table 2). In a partial analysis of marriage data from the 1988 Demographic Survey, Nhan and Hanenberg find a SMAM of 22.4 in the north and 24.6 in the south, which is perfectly in line with the census results.

They contend that the higher age at marriage of southern women resulted

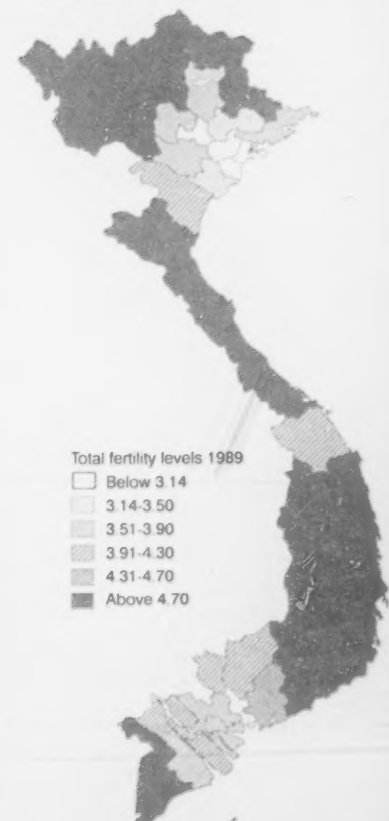
from a dearth of males following the war. But confirmation of this hypothesis must await the full data on age structure by region and more detail on the prevalence of widowhood and divorce. For the time being, it is worth noting that the proportion of women of childbearing age who are widowed is actually lower in Viet Nam than it is in Indonesia. This may be caused by a faster rate of remarriage in Viet Nam.

Infant and Child Mortality

Mortality data are notoriously difficult to collect. In most developing countries, analysts are forced to use estimation methods that rely heavily on assumptions that may not be valid for the country under investigation. Added

Continued on next page

Figure 1. Total Fertility in Viet Nam by Region, 1989



Source. 1989 Population Census of Viet Nam.

to this is the problem of having to work from small samples. It is little wonder demographers throw up their hands when confronted with questions about current levels and trends of mortality.

Nonetheless, mortality measures are important because they reflect the welfare of the society and in particular progress in the provision of adequate nutrition and health care. The trick is in knowing whether apparent changes in the estimates are real or merely products of the method of measurement.

The 1989 Census data, when processed using the UN Population Division's demographic software *Mortpak Lite*, yield an estimated infant mortality of 44 deaths to infants under 1 year of age for every 1,000 live births (see

Table 3). By comparison, the 1988 Demographic Survey produced an estimate of 37 deaths per 1,000 live births for the period 1984-1986. The latter estimate is based on a much smaller sample, and on a different method of estimation and was regarded as suspect by the survey's authors (see Nhan and Hanenberg, endnote 3).

The census results presently suggest that previous claims of infant mortality rates under 40 were perhaps premature. Nonetheless, Viet Nam's mortality levels are lower than those of many other Asian countries, including Indonesia and the Philippines, and suggest that the national primary health

Table 3. Viet Nam's Infant and Child Mortality Rates, 1989

Region	Infant mortality ^a	Child mortality ^b	Life expectancy at birth
Total	44	13	63.3
Urban	31	7	68.1
Rural	47	15	62.5

^aInfant deaths (under age 1) per 1,000 live births.

^bDeaths age 1-5 per 1,000 survivors who reached age 1.

Source. Calculated from 1989 Census Preliminary Report.

care program described in Worth,⁴ Vu Can,⁵ and the pamphlet on public health in Viet Nam⁶ may indeed have been effective in reducing mortality in a very poor country.

In line with the relatively low infant mortality rates, Viet Nam has low child mortality and an expectation of life at birth of over 60 years. Estimates for regions and provinces will be produced following the publication of later census results.

Conclusion

The 1989 Viet Nam Population Census represents a major contribution to our understanding of social and demographic change in the second largest country of Southeast Asia. It reflects some of the legacies of war and extended economic disruption, but it also indicates that government policies to reduce fertility and mortality are showing signs of success. The preliminary results are enough to make analysts await future publications with a heightened sense of anticipation.

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The negotiable stipend is comparable with academic salaries and includes transportation costs. Applicants are requested to submit a brief estimate of transportation and salary requirements; applications combining the award with sabbatical leave are encouraged.

Closing date for applications is January 15, 1991. Interested individuals should forward a brief description of their planned activities, curriculum vitae, and a sample of recent publications to the address below.

Interns for Summer 1991:

Applications are invited for the PRB Internship Program for Summer 1991.

Open to both undergraduate and graduate students, PRB internships enable persons with a strong interest in population to assist professional demographers working on national and international issues. Some population-related work is useful but not a prerequisite. Interns usually work 35 hours a week and receive a stipend of \$8.00 per hour.

Closing date for applications is February 1, 1991. Interested individuals should forward a letter of application to the address below, describing completed academic studies, future academic plans, population interests, and any additional information supporting their candidacy. Three letters of recommendation from instructors should be sent separately.

Contact:

Dr. William O'Hare
Population Reference
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777 14th St., N.W., Suite 800
Washington, D.C. 20005
phone (202) 639-8040

Chartbook Explains World Growth

Studying population growth is made easy in PRB's new chartbook, a 32-page text booklet that explains the dynamics of, and prospects for, the world's 5.2 billion people.

A publication of PRB's Population Education Department, *World Population: Fundamentals of Growth* (2nd edition), the chartbook is written for a classroom setting (seventh grade through college). Incorporating the latest available statistics, the chartbook covers:

- World population growth and distribution through history
- The dynamics of natural increase
- The effect of migration
- Population composition
- Population momentum
- Patterns of world urbanization
- World health

The chartbook is illustrated by eight large charts and nine smaller charts. It contains PRB's 1990 *World Population Data Sheet* in an 8½ x 11 inch format, plus a glossary and a list of the world's largest urban areas.

An appended study section helps students review the text and analyze the charts. Activities utilizing the Data Sheet are included. Teachers also receive a teaching guide.

The mission of PRB's Population Education Department is to provide teachers with resources that enable them to teach demographic concepts and population issues in such fields as geography, history, global studies, and current events. The department publishes other teaching packages and operates an audiovisual library.

—A.H.

Copies of the 32-page *World Population: Fundamentals of Growth* with an accompanying teacher's guide can be ordered from PRB, Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB; or by calling 1-800-877-9881. Visa and MasterCard accepted. Prices are: \$5.00 a single copy; 2 or more copies, \$4.00 each. Sets of 15 slides are available for \$10.00. Orders of \$50.00 or less must be prepaid and include \$1.00 or 3 percent of total order (whichever is greater) for postage and handling. PRB members receive a 20-percent discount on a single copy.

SOFTWARE

PC Globe 3.0 is the latest version of this atlas-on-a-floppy-disk program for personal computers. It provides instant profiles of 177 countries, in the form of maps, charts, and data tables.

Many social and economic measures are available for each country. The program's demographic data include such measures as national population size for various periods, population age-sex pyramids, and growth rates. Comparisons between countries can be put in bar-chart form, and some population measures can be displayed on maps. Data or comparisons generated in *PC Globe* can be exported to *Ventura Publisher*, *WordPerfect*, and *Lotus*

1-2-3, and screens captured and saved in the PCX format.

The program is useful both for the classroom and as a reference. It runs on IBM PCs or compatibles with floppy drive or hard disk and 512K of memory. Hercules, CGA, EGA, or VGA displays are supported. (*PC Nations*, a companion program available from the same vendor, displays national flags and plays national anthems for 175 countries.)

PC Globe 3.0 is available in English, French, German, and Spanish versions from *PC Globe, Inc.*, 4700 South McClintock, Tempe, Ariz. 85282. Phone: (602) 730-9000. Price: \$69.95.

—A.H.

POPULATION UPDATE

Estimated United States Population:

As of June 1, 1990	251,142,000
As of June 1, 1989	248,535,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1062.

Estimated World Population:

As of October 1990	5,344,000,000
Annual growth	93,000,000

Extrapolation from the mid-1990 population on PRB's 1990 *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: April 1990

Item	12 months ending with April					
	Number		Rate			
	1990	1989	1990	1989	1988	1987
Live births	4,084,000	3,943,000	16.4	16.0	15.7	15.5
Deaths	2,167,000	2,150,000	8.7	8.7	8.9	8.7
Natural increase	1,917,000	1,793,000	7.7	7.3	6.8	6.8
Marriages	2,414,000	2,379,000	9.7	9.6	9.8	10.0
Divorces	1,170,000	1,188,000	4.7	4.8	4.7	4.8
Infant deaths	38,900	38,500	9.6	9.8	10.0	10.3
Population base (in millions)	...	...	249.0	246.3	243.9	241.6

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. *Monthly Vital Statistics Report* (Vol. 39, No. 4) from the National Center for Health Statistics.

TAKE A NUMBER

1990 State Populations: Census Preliminary Results Versus PRB Estimates

Region or state	1980 final count	1990 estimate (PRB)	1990 prelim. results	% change between est. & prelim.	Change in		
					House seats 1980	House seats 1990*	House seats 1980-90
UNITED STATES	226,545,805	250,088,000	245,837,681	-1.7	435	435	0
NORTHEAST REGION	49,135,283	50,909,000	50,033,552	-1.7	95	88	-7
New England	12,348,493	13,108,000	13,025,114	-0.6	24	23	-1
Maine	1,124,660	1,234,000	1,218,053	-1.3	2	2	0
New Hampshire	920,610	1,124,000	1,103,163	-1.8	2	2	0
Vermont	511,456	574,000	560,029	-2.4	1	1	0
Massachusetts	5,737,037	5,930,000	5,928,331	-0.0	11	10	-1
Rhode Island	947,154	1,002,000	988,609	-1.3	2	2	0
Connecticut	3,107,576	3,244,000	3,226,929	-0.5	6	6	0
Middle Atlantic	36,786,790	37,802,000	37,008,438	-2.1	71	65	-6
New York	17,558,072	17,981,000	17,626,586	-2.0	34	31	-3
New Jersey	7,364,823	7,750,000	7,617,418	-1.7	14	13	-1
Pennsylvania	11,863,895	12,072,000	11,764,434	-2.5	23	21	-2
MIDWEST REGION	58,865,670	60,361,000	59,223,559	-1.9	113	105	-8
East North Central	41,682,217	42,440,000	41,650,787	-1.9	80	74	-6
Ohio	10,797,630	10,939,000	10,777,514	-1.5	21	19	-2
Indiana	5,490,224	5,619,000	5,498,725	-2.1	10	10	0
Illinois	11,426,518	11,692,000	11,325,247	-3.1	22	20	-2
Michigan	9,262,078	9,298,000	9,179,661	-1.3	18	16	-2
Wisconsin	4,705,767	4,894,000	4,869,640	-0.5	9	9	0
West North Central	17,183,453	17,921,000	17,572,772	-1.9	33	31	-2
Minnesota	4,075,970	4,387,000	4,358,864	-0.6	8	8	0
Iowa	2,913,808	2,848,000	2,766,658	-2.8	6	5	-1
Missouri	4,916,686	5,173,000	5,079,385	-1.8	9	9	0
North Dakota	652,717	655,000	634,223	-3.1	1	1	0
South Dakota	690,768	716,000	693,294	-3.1	1	1	0
Nebraska	1,569,825	1,617,000	1,572,503	-2.8	3	3	0
Kansas	2,363,679	2,526,000	2,467,845	-2.3	5	4	-1
SOUTH	75,372,362	86,192,000	84,471,556	-2.0	142	149	7
South Atlantic	36,959,123	43,639,000	42,998,314	-1.5	69	75	6
Delaware	594,338	683,000	658,031	-3.6	1	1	0
Maryland	4,216,975	4,745,000	4,732,934	-0.3	8	8	0
Dist. of Columbia	638,333	597,000	574,844	-3.8	—	—	—
Virginia	5,346,818	6,162,000	6,127,680	-0.6	10	11	1
West Virginia	1,949,644	1,843,000	1,782,958	-3.2	4	3	-1
North Carolina	5,881,766	6,633,000	6,552,927	-1.2	11	12	1
South Carolina	3,121,820	3,547,000	3,407,389	-3.9	6	6	0
Georgia	5,463,105	6,509,000	6,386,948	-1.9	10	11	1
Florida	9,746,324	12,921,000	12,774,603	-1.1	19	23	4
East South Central	14,666,423	15,450,000	15,006,552	-2.9	28	27	-1
Kentucky	3,660,777	3,728,000	3,665,220	-1.7	7	6	-1
Tennessee	4,591,120	4,972,000	4,822,134	-3.0	9	9	0
Alabama	3,893,888	4,129,000	3,984,384	-3.5	7	7	0
Mississippi	2,520,638	2,622,000	2,534,814	-3.3	5	5	0
West South Central	23,746,816	27,102,000	26,466,690	-2.3	45	47	2
Arkansas	2,286,435	2,414,000	2,337,395	-3.2	4	4	0
Louisiana	4,205,900	4,363,000	4,180,831	-4.2	8	7	-1
Oklahoma	3,025,290	3,217,000	3,123,799	-2.9	6	6	0
Texas	14,229,191	17,109,000	16,824,665	-1.7	27	30	3
WEST	43,172,490	52,627,000	52,109,014	-1.0	85	93	8
Mountain	11,372,785	13,655,000	13,534,099	-0.9	24	24	0
Montana	786,690	807,000	794,329	-1.5	2	1	-1
Idaho	943,935	1,022,000	1,003,558	-1.8	2	2	0
Wyoming	469,557	471,000	449,905	-4.5	1	1	0
Colorado	2,889,964	3,330,000	3,272,460	-1.7	6	6	0
New Mexico	1,302,894	1,542,000	1,490,381	-3.3	3	3	0
Arizona	2,718,215	3,611,000	3,619,064	0.2	5	6	1
Utah	1,461,037	1,719,000	1,711,117	-0.5	3	3	0
Nevada	800,493	1,154,000	1,193,285	3.4	2	2	0
Pacific	31,799,705	38,972,000	38,574,915	-1.0	61	69	8
Washington	4,132,156	4,843,000	4,826,675	-0.3	8	9	1
Oregon	2,633,105	2,859,000	2,828,214	-1.1	5	5	0
California	23,667,902	29,618,000	29,279,015	-1.1	45	52	7
Alaska	401,851	529,000	545,774	3.3	1	1	0
Hawaii	964,691	1,124,000	1,095,237	-2.6	2	2	0

Sources: U.S. Census Bureau: 1980 final count and 1990 Census preliminary results. PRB: 1990 estimates, based on Census Bureau 1989 estimates.

*1990 seats calculated from 1990 Census preliminary results.

POPULATION POSITIONS

Social Science Research Fellowships in population studies are being offered by the Rockefeller Foundation. This program will enable up to four or five highly qualified persons holding social science doctorates to receive fellowships at developing-country population research and training centers for up to two years.

The Fellows' primary function will be to carry out research on population issues in collaboration with the staff of the host institution. A fellow may also be asked to teach a course in his or her field.

The program is designed to expand the number of social scientists with interdisciplinary research experience in international population and development. It is open to citizens and permanent residents of the United States and Canada.

Applications must be received by December 31, 1990. Finalists will be notified in early 1991 for an interview. It is unlikely any fellowships will be awarded before June 1991; some awards may be made as late as November.

For information, contact: Fellowship Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, N.Y. 10036.

ADDENDA



"That's the gist of what I wanted to say. Now get me some statistics to base it on."

Drawing by Joe Mirachi; © 1977, The New Yorker Magazine, Inc.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in *Current Readings*. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005

1988 DEMOGRAPHIC YEAR-BOOK, by the Department of International Economic and Social Affairs, Statistical Office, United Nations. New York: United Nations, 1990. 1,399 pages. \$110.00 hardback.

The UN's annual compilation of national population statistics is surely the most essential single reference book on current international population statistics. The title refers to the most recent date for which the enclosed data are available; this latest, 40th edition, which weighs seven pounds, rolled off the presses last summer.

These data are also available from the UN on computer tape for \$320, plus \$20 for the reel.

Besides the latest vital statistics (relating to birth, death, marriage and divorce) common to all *Demographic Yearbooks*, each edition has a special topic. This year's is "population census statistics." Data are given by sex and age group for many countries, though, needless to say, data are not available from every country on every topic. But if what you require is the most recent, authoritative numbers and vital statistics for 218 countries and areas around the world, the 1988 *Demographic Yearbook* is the one book to have.

—Art Haupt

LIFETRENDS: The Future of Baby Boomers and Other Aging Americans, by Jerry Gerber, Janet Wolff, Walter Klores, and Gene Brown. New York: Macmillan, 1990. 271 pages. \$18.95 hardback. ISBN 0-02-517291-3.

The 75 million Americans born between the years of 1946-1964, best known as the baby boomers, have had a massive impact on the U.S. life style. Among other effects, says *Lifetrends*, this generation

has "altered the American family, created new mass markets, transformed the relationship between men and women, and upended American values."

In the bestseller tradition of *Megatrends* and *Future Shock*, *Lifetrends* is another trend-auguring book with a buzzword title. It presents an array of statistical facts and goes on to speculate how the boomers may affect the entire nation in upcoming years as their generation grows older and approaches retirement.

The Census Bureau projects that in 2020, 51 million people over the age of 65 will live in America, more than double today's 22.6 million. By that time, say the authors, the baby boomers will constitute an "elderculture" and bring renewed awareness to old age as a highly rewarding and vital part of a person's life.

For example, "virtually every product will be engineered with the older consumer in mind." As the baby boomers age, they will bring new meaning to elder sexuality and disprove the myth that older people are nonsexual. Nor are boomers likely to take early retirement. In order to respond to the boomers' increasing demands for adequate health care as they age, medical institutions will be forced to change. "Doctors will lose much of their authority as other professionals [e.g., physician assistants] take over...and patients take more responsibility for treating themselves."

Lifetrends was co-authored by members of a consulting group that specializes in the mature consumer market. The speculations and analysis of possible new trends provide interesting reading for the future-minded American who is pondering the changes that society will undergo in the 21st century.

—Laurie Gill

A TASTE OF THE COUNTRY: A Collection of Calvin Beale's Writings, edited by Peter A. Morrison. A RAND Corporation Research Study. University Park, Pa.: Pennsylvania State University Press, 1990. 249 pages. \$28.50 hardback. ISBN 0-271-00631-5.

This compendium of 19 articles and essays assembles in one place three decades of Calvin Beale's observations and studies of U.S. rural areas.

As senior demographer of the Department of Agriculture, Beale has long analyzed U.S. rural, regional, and ethnic population trends. Such research has also been his avocation, for in addition to studying quantitative data, he has made himself familiar on a first-hand basis with seemingly every nook and cranny of the nation.

In the late 1960s, this on-site familiarity helped Beale discover that counter to historical trends and popular preconceptions, the United States's long-running migration from metropolitan to nonmetropolitan areas had shifted into reverse. (But then, as he has said, "people have notions of the trends of society, and they hold them until they are told different.")

His famous essay on the rural revival appears in this book. Also included is a follow-up essay on the revival's aftermath, when Americans resumed beating a path for urban areas.

A Taste of the Country enables the reader to join Beale on his explorations of the United States, including places and ethnic groups that most people have never heard of, much less seen. It's a fascinating book, one that shines with what editor Peter Morrison characterizes as Beale's "encyclopedic knowledge of—and an endless fascination with—regions and places and peoples and how they are intertwined."

—A. H.

SPOTLIGHT

IRAQ

Population (mid-1990 est.): 18.8 million
Land Area: 167,920 sq. miles
Population density: 112 per sq. mile
Births per 1,000 pop.: 46
Deaths per 1,000 pop.: 7
Rate of natural increase: 3.9 percent
Total fertility rate: 7.3 children per woman
Infant mortality rate: 67 infant deaths per 1,000 live births
Life expectancy at birth: 67 years
Capital: Baghdad

by Alex de Sherbinin

With the highest natural increase rate of any country (3.9 percent), Iraq has nearly 19 million people, of whom 75-80 percent are Iraqi Arab, 15-20 percent are Kurds, and 5 percent in other minority groups. Bordered by mountain chains to the north and east, and by an arid plateau to the south and west, it is a virtually landlocked nation with few natural resources other than oil and the agricultural area of the Fertile Crescent.

The Crescent's unusual geography, where rivers are actually raised above the surface of the valley on beds of their own deposits, facilitated irrigation and led to the early development of towns and the high level of social organization that state formation entails. The agricultural lands are subject to flooding and salinization, however, resulting in historical fluctuations in population concentrations and variation in the region's fortunes.

Today, Iraq's economy is tied more to the rise and fall of world oil prices than to the water in its rivers. Ninety-five percent of the country's export revenues are derived from oil, whereas agriculture, which involves 35 percent of the population, only accounts for some 10 percent of GNP. Interestingly, Iraq's large population relative to other Arab states makes it less dependent on foreign workers—mostly from poorer Asian nations—and it is therefore considered to be at an advantage in the development of domestic industries. Some 1 million foreigners were residing in Iraq prior to Iraq's recent invasion of Kuwait.

For Saddam Hussein, who succeeded to Iraq's presidency in 1979, a large population and rapid population growth are part of an overall development strategy aimed at exploiting the country's agricultural tracts, abundant water supplies, and mineral resources. In a region of booming population growth, Iraq remains the growth leader. If present rates were to continue, Iraq's population could double in under 20 years.

Much of the current increase may be attributable to the government's pronatalist stance. Families are granted allowances and benefits, and women receive paid maternity leave at 100 percent of earnings for the first 10 weeks, all with the expressed aim of encouraging all women to have a minimum of 4 children. Contraceptive prevalence among currently married women was 14 percent in 1974, and although

it has likely increased since then, the government has acted to restrict access to modern contraceptives in recent years.

Improvements in mortality levels have also contributed to growth. The government has done much to improve maternal and child health care, as well as to control diarrhoeal diseases, especially in rural areas.

Due to river flooding, the transportation network is difficult to maintain and rural areas have been left isolated, lagging behind in development. At the same time, this isolation has contributed to the preservation of the country's ethnic minorities, including Persians in the East and pastoral nomads in the West. Iraq's northern Kurdish minority faced Saddam's wrath after their open collaboration with Iran during the Gulf War. In 1988 close to 16,000 fled chemical weapons attacks by the Iraq army, ending up in Turkish refugee camps.

Iraq's recent invasion of Kuwait may only foreshadow more serious conflicts to come, not over oil, but water, the region's original treasure. After Turkey completes the Ataturk dam on the Euphrates, the amount of water flowing through Syria into Iraq could slow to a trickle. The *Christian Science Monitor* of March 8, 1990, warns that "unless population growth rates, now averaging 3 percent in the Middle East, are curbed, excess population will wipe out all projected gains in water development and conservation within 30 years."

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